



## The Superiority of Dividends A Comparison of Value Strategies

By Geoff Considine  
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Dividend-focused strategies have won the allegiance of many prominent investors, including [Rob Arnott](#), [Bill Gross](#) and [Jeremy Siegel](#). Others claim value-based strategies offer superior risk-adjusted returns. Both sides can claim a partial victory in this debate, but I will show that, when understood properly, dividend strategies offer a crucial edge – one that many investors will find attractive.

There are a [variety](#) of reasons why investors may concentrate on dividends when choosing equities, including:

- ¶ A preference for income, rather than having to sell assets
- ¶ A belief that dividend-paying stocks will outperform non-dividend stocks
- ¶ A belief that stocks that pay dividends are less risky than stocks that do not
- ¶ A belief that dividends have historically comprised a substantial component of total return

Implicit in all of the above is the idea that dividends are a more consistent form of returns than price appreciation. Research backs up that conclusion. Dividend-paying companies have been shown to be less likely to play accounting games with their earnings (a practice sometimes referred to, generously, as “earnings management”) and have been shown to have higher-quality earnings.

Stock Investors buy a fraction of the entire future stream of income generated by a company. If earnings are more predictable and consistent, total returns should be steadier as well.

But the key differentiator is another special feature of dividend stocks – reduced estimation risk, the risk associated with the difficulty of estimating future returns. In a 2011 [article](#), I described research that demonstrates how dividend stocks lower the estimation risk for the total return of a portfolio. Today, I’ll clarify how this particular benefit of dividend investing differentiates it from other value strategies.

Let’s explore some of arguments posed by critics and proponents of dividend-focused investing, in order to understand why neither side of the argument is capturing the full story. Then we’ll see why estimation risk is the missing piece of this discussion.



## Is a portfolio selected on dividend yield sub-optimal?

A recent [article](#) by Michael Nairne of Toronto-based Tacita Capital compared the performance of portfolios selected on the basis of high-dividend yield to other value-oriented strategies. Using data from 1952 through 2011, courtesy of Ken French's [website](#), Nairne found that, while high-dividend stocks outperformed the S&P 500 by 1.8% per year over the period studied, other value strategies performed considerably better. Portfolios chosen on the basis of high earnings-to-price ratio (E/P), in particular, returned 4.9% per year more than the S&P 500 and 2.7% more than the high-dividend-yield portfolio. Nairne's results are consistent with a 2010 [analysis](#) by Buckingham Asset Management (BAM) that used the same data set (though with data through 2009, rather than 2011). I confirmed Nairne's results as well.

Nairne and BAM concluded that portfolios built on the basis of high-dividend yields are a sub-optimal value strategy and that others (especially a low P/E strategy) are superior.

I see a couple of important caveats for anyone who plans on extrapolating these results forward, however.

First, neither Nairne nor BAM noted that the high-E/P portfolio has a beta (with respect to the S&P 500) of 1.10, while the high-dividend-yield portfolio's beta is only 0.90. This is a substantial difference that goes a long way towards explaining the apparent outperformance of the high E/P strategy. The beta-corrected outperformance of the high-dividend portfolio is 3.2% per year, versus 3.8% for the high-E/P portfolio. Thus, in practical terms, the apparent advantage for the high-E/P strategy is just 0.6%.

So the relative under-performance of dividend-based portfolios compared to high-E/P portfolios and other value strategies is not fully explained by the portfolios' beta. There is a missing element if we are to fully explain away the underperformance of dividend-based stocks relative to other value strategies.

As we'll see, that missing element is reduced estimation risk.

## Understanding dividends

Companies that pay dividends are giving a portion of their earnings to shareholders. Alternatively, the company could invest those earnings in new growth opportunities or buy back its own shares. If markets were perfectly efficient, investors would earn the same total return regardless of which choice a business makes.

But a cash dividend today is not the same as future returns: one is certain and one is not. The difference is analogous to the *market value* of a call option on a stock compared with holding the option until expiration. The expected value of these two alternatives may be the same, but the outcomes are clearly quite different. In one case, you receive a specific



cash flow; in the other you have an uncertain future cash flow – or, potentially, no cash flow at all.

Imagine, for instance, that you own a share of SPY, an S&P 500 index fund (current price: \$141.30). You can sell a \$140 call option expiring on 12/20/2013 for [\\$10.70](#). The current yield on SPY is about 2%. According to an [online options tool](#), the fair value for the option is \$11, assuming volatility of 19%, which is very close to the three-year average for SPY and the current [implied volatility for SPY](#). The model matches the current option price of \$10.70.

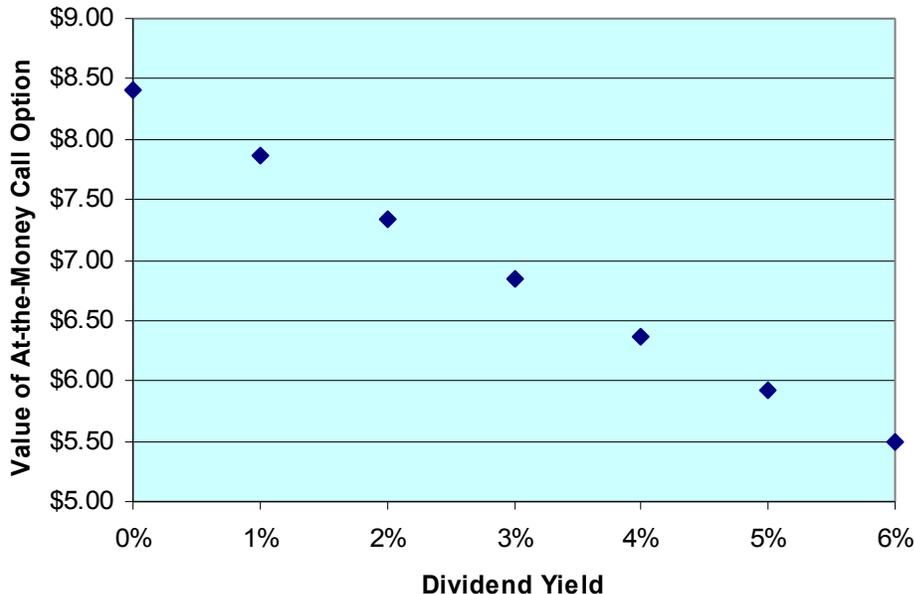
By selling this call option, you give up all of the possible upside from any gains in SPY, and instead you receive \$10.70. This equates to an annualized return of about 5.9% from the premium payment from selling the call. The calculation of annualized percentage income from selling the call requires that we account for the fact that this option is slightly 'in the money' (e.g. has a strike price less than the current price of SPY and that the option has more than a year to expiration. If you sell this call, you have expected income of 7.9%: 2% in dividends and 5.9% for the call.

How different is your position if you sell the call versus simply being long SPY? If you sell the call, you know that you will receive 7.9% over the next year. If you hold a long position in SPY, you will receive 2% in dividends, but the rest of your return will depend on what the market does in the next 12 months.

In other words, your estimation risk is higher.

A dividend is analogous to selling a call, which we can see clearly when considering how the dividends that a stock or index pays reduce the call option's value. The chart below shows the theoretical value of a one-year call option on a stock with 20% volatility and a risk-free rate of 1% as the dividend yield of that stock increases. (The price of our hypothetical stock today is \$100, and the call option has a strike of \$100.)

### ***Value of call option versus dividend yield***



The relationship is simple: When a stock pays a dividend, the value of a call option on that stock decreases, and the bigger the dividend gets, the lower the value of the call.

Receiving a dividend does not mean that you are giving up all potential price appreciation above the current value, as you do when you sell an at-the-money call. That's why a 6% dividend yield (which equates to \$6 in dividends in the current example) in the chart above reduces the value of the call by only about \$3 versus the zero-dividend case. Dividend-paying companies pay out only some fraction of their earnings, and the retained earnings are used to fund further growth, which should result in price appreciation. (The current ratio of dividend payments to total earnings for the S&P 500 is about 30%, but the long-term average is 52%.)

Because both dividends and call option premiums are a form of tradeoff between future price appreciation and cash in hand, we can think of a portfolio that pays a dividend as implicitly having sold a call option. Through this new lens, we can re-compare dividend-paying stocks to other value strategies.

### **Reevaluating the historical record**

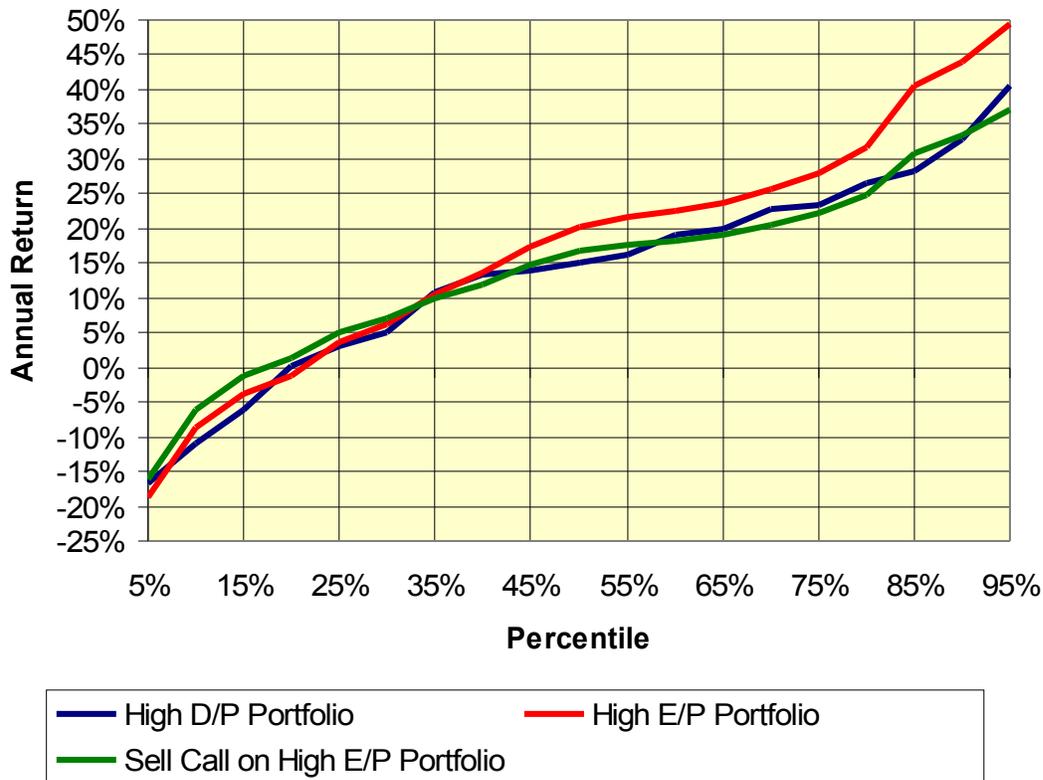
The main critique of a dividend-focused portfolio strategy, as articulated by Nairne and BAM, was that its historical average return is lower than those that other value strategies offer. Even after correcting for beta differences, the high-E/P value strategy still seems to have an advantage of 0.6% per year over a dividend-focused strategy.



Our theory, however, is that high-dividend stocks tend to be value stocks, which means that owning them is similar to selling a call option against a value portfolio. Higher income from the sale of the option reduces the uncertainty in future returns, and we should expect that will come at a price.

Are the historical data consistent with our theory? In the chart below, I have depicted percentiles of annual returns from 1952 to 2011 for the high-E/P portfolio and the high-dividend yield portfolio (D/P) series developed by Ken French (consistent with the data used by Nairne). The percentiles of return show the historical probabilities of having returns greater or less than a certain value. The 80<sup>th</sup> percentile corresponds to the returns than the portfolio has historically reached or exceeded in the highest 20% of years, for example. At the 75<sup>th</sup> percentile, the high E/P portfolio has returned about 27% which means that this portfolio has historically returns 27% or more in 1-in-4 years. I also show a third portfolio, which every year sells a one-year, at-the-money call option on the high-E/P portfolio and takes the option premium as additional income. The call covers 30% of the portfolio, retaining the upside potential of 70% of the portfolio.

**Percentiles of return for high-E/P portfolio, high-D/P portfolio, and High-E/P portfolio with a call sold**



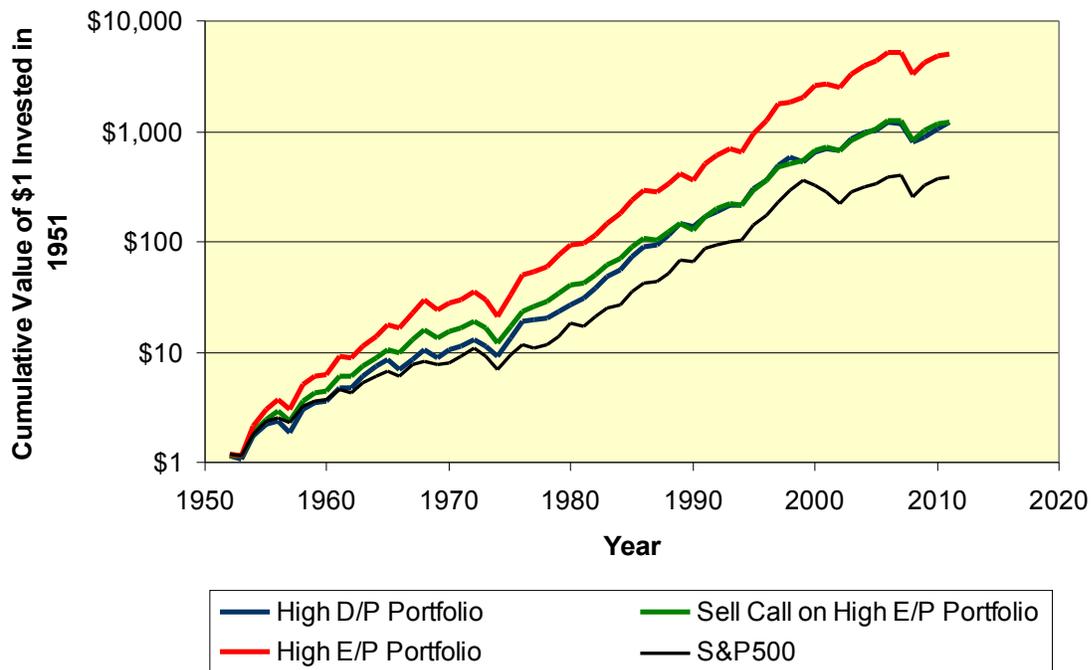


I have previously explained why owning a dividend-paying stock is analogous to selling a call option against that stock. As this example clearly shows, the distribution of returns in the dividend portfolio is consistent with actually having done so.

It is a mistake to assume, however, that dividend stocks are less risky than value stocks in terms of total returns. The fifth percentile return (the worst 1-in-20 annual outcomes) is almost identical for the high-D/P and high-E/P portfolios. The high-D/P portfolio's lower volatility comes from reduced uncertainty in potential upside, rather than a reduction in the maximum possible loss.

The chart below shows the cumulative value of \$1 invested at the end of 1951 with each of the three strategies we've just considered, compared against the S&P 500.

**Cumulative value of \$1 invested at the end of 1951**



The high-E/P portfolio with a call option sold against it has a beta with respect to the S&P 500 of 0.85, similar to that of the high-D/P portfolio (0.90). This makes sense; selling a call option against a portfolio tends to reduce beta.

Here, again, we see that a high-dividend strategy differs from a high-E/P strategy primarily in that the higher dividends are comparable to a cash payment, in return for which we give up potential price appreciation. Both option pricing theory and the observed historical distribution of returns support this claim.



## **A useful metaphor**

There's another way to think about all this. Imagine that you own a ski condo in Colorado that you intend to rent out. You know that your condo can rent for at least \$350 per night in the peak season – and considerably more if the snow is good. As the season approaches, a friend who is an avid skier comes to you and offers you \$5,000 per month to rent your condo from December through April. So, you can lock in \$25,000 for the season, or you can wait and see how many days you can rent your condo by the week. There are roughly 150 days (21 weeks) from December through April. The average occupancy for condos in your building is 70% over this period, so you can reasonably *expect* that you will generate \$36,750 for the season ( $150 \times \$350 \times 0.7$ ).

Why would anyone ever accept \$25,000 when the expected income is \$36,750? In this context, the answer is pretty obvious. A contract for \$25,000 for the season is certain, whereas the expected income from renting by the week is uncertain. There is much more estimation risk if you rent by the week.

Whether renting a condo by the season or owning dividend stocks, you're not mitigating the worst kinds of downside risk in any meaningful way. No matter if you rent the condo by the week or by the season, if the real estate market collapses, the value of your investment will go down. The same is true of dividend stocks, as we previously saw in the lowest-percentile historical returns for the high-D/P and high-E/P portfolios.

## **So why be a dividend investor?**

When you buy dividend-paying stocks, as when you sell call options, you are trading uncertain future cash flow for realized cash flow today. In exchange for safe and predictable income, you sacrifice potential gains, and you retain most the downside risk. Neither selling covered calls nor choosing dividend-paying stocks is a free lunch. A dividend strategy is a value strategy with reduced estimation risk in realizable income.

And dividend-paying stocks may be more or less risky than non-dividend stocks, as measured by loss potential or volatility. Companies in distress often sport high dividend yields for a while, because their stock prices have collapsed. I agree with critics of dividend investing who warn investors against simply chasing yield.

The question for investors considering dividend-paying stocks (or selling covered calls) is how much upside they are willing to sacrifice in order to reduce the estimation risk associated with price returns. If you are willing to take equity-like levels of volatility but reduce estimation risk in income, you should find dividends and covered calls very attractive. In practice, most investors will prefer dividends over selling call options against their holdings, not least due to the higher complexity associated with managing a portfolio that includes covered calls.



Dividend-focused portfolios also tend to have a strong value tilt. If you've been ignoring the distinction between dividends and other value strategies associated with estimating risk, however, you've been missing a crucial distinction.

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